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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,333	10/03/2003	Richard Norman	86177-80	8771

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EXAMINER	
IQBAL, NADEEM	

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/677,333	NORMAN, RICHARD	
	Examiner	Art Unit	
	Nadeem Iqbal	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27-29* is/are allowed.

6)☒ Claim(s) *1-4 and 8-25* is/are rejected.

7)☒ Claim(s) *5-7 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *Oct 3, 2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lein (U.S. Patent number 5395257) in view of Liddle et al., (U.S. Patent number 5999097).

4. As per claim 1, Lein teaches (col. 2, lines 64-66) a circuit card assembly having its connector connected to the mating connector of the mother board, He also teaches connectors and other redundant fault containment modules (See Fig. 1). He thus teaches limitations pertain to a first set of discrete signal conducting members and a second set of discrete signal conducting members, the second set being remote from the first set, the signal conducting members in the second set being arranged generally side by side. Lein does not explicitly discloses that each

signal conducting member of the first set being provided with connection paths to a different pair of non-contiguous signal conducting members of the second set. Liddle teaches (col. 2, lines 17-19) patterns of conductors 11 and 12 form connection paths between connecting terminals 14 and also teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the connection paths and the changing of connection paths as taught by Liddle into the invention of Lein to be able to provide connection paths to a different pair of non-contiguous signal conducting members of the second set as claimed. This is because Liddle teaches (col. 1, lines 33-35) a connector circuit that is adjustable so as to change the connection paths between the first and second sets of terminals, thus motivating a person of ordinary skill in the art for the stated inclusion.

5. As per claim 2, Liddle teaches (col. 2, lines 17-19) patterns of conductors 11 and 12 form connection paths between connecting terminals 14 and also teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides two different pairs of non-contiguous signal conducting members of the second set.

6. As per claim 3, Liddle teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides the first signal conducting member of the second set being different for each signal conducting member of the first set and the

second signal conducting member of the second set being different for each signal conducting member of the first set.

7. As per claim 4, Liddle teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He therefore provides motivation to a person of ordinary skill in the art to the certain order characterize by a series of positions, each different pair of non-contiguous signal conducting members of the second set occupying a different pair of unsuccessive positions in the certain order.

8. As per claims 8 & 9, With reference to the connector further includes at least one semiconductor body defining the first and second surfaces. Liddle teaches (col. 3, lines 40-43).

9. As per claim 10, With reference to the second surface corresponds to the same particular layer of the semiconductor body. Liddle teaches (col. 3, lines 56-58).

10. As per claim 11, With reference to signal conducting members are selected from the group consisting of wires, solder bumps, traces and vias. Lein teaches (col. 2, lines 43-45).

11. As per claims 12 & 13, With reference to the signals are electric signals. Lein teaches (col. 2, lines 45-47).

12. As per claim 14, Lein teaches (col. 2, lines 64-66) a circuit card assembly having its connector connected to the mating connector of the mother board, He also teaches connectors and other redundant fault containment modules (See Fig. 1). He thus teaches limitations pertain to a first set of discrete signal conducting members and a second set of discrete signal conducting members, the second set being remote from the first set, the signal conducting members in the second set being arranged generally side by side. Lein does not explicitly discloses that each

signal conducting member of the first set being provided with connection paths to a different pair of non-contiguous signal conducting members of the second set. Liddle teaches (col. 2, lines 17-19) patterns of conductors 11 and 12 form connection paths between connecting terminals 14 and also teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides a control mechanism operative to select as claimed. It would have been obvious to a person of ordinary skill in the art to include the connection paths and the changing of connection paths as taught by Liddle into the invention of Lein to be able to provide connection paths to a different pair of non-contiguous signal conducting members of the second set as claimed. This is because Liddle teaches (col. 1, lines 33-35) a connector circuit that is adjustable so as to change the connection paths between the first and second sets of terminals, thus motivating a person of ordinary skill in the art for the stated inclusion.

13. As per claim 15, Liddle teaches (col. 2, lines 17-19) patterns of conductors 11 and 12 form connection paths between connecting terminals 14 and also teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides two different pairs of non-contiguous signal conducting members of the second set.

14. As per claim 16, Liddle teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides the first signal conducting member of the second set being different for each signal conducting member of the first set and the

second signal conducting member of the second set being different for each signal conducting member of the first set.

15. As per claim 17, Liddle teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He therefore provides motivation to a person of ordinary skill in the art to the certain order characterize by a series of positions, each different pair of non-contiguous signal conducting members of the second set occupying a different pair of unsuccessive positions in the certain order.

16. As per claims 18 & 19, With reference to the connector further includes at least one semiconductor body defining the first and second surfaces. Liddle teaches (col. 3, lines 40-43).

17. As per claim 20, With reference to the second surface corresponds to the same particular layer of the semiconductor body. Liddle teaches (col. 3, lines 56-58).

18. As per claim 21, With reference to signal conducting members are selected from the group consisting of wires, solder bumps, traces and vias. Lein teaches (col. 2, lines 43-45).

19. As per claims 22 & 23, With reference to the signals are electric signals. Lein teaches (col. 2, lines 45-47).

20. As per claims 24 & 25, Lein teaches (col. 2, lines 64-66) a circuit card assembly having its connector connected to the mating connector of the mother board, He also teaches connectors and other redundant fault containment modules (See Fig. 1). He thus teaches limitations pertain to a first set of discrete signal conducting members and a second set of discrete signal conducting members, the second set being remote from the first set, the signal conducting members in the second set being arranged generally side by side. Lein does not explicitly discloses that each

signal conducting member of the first set being provided with connection paths to a different pair of non-contiguous signal conducting members of the second set. Liddle teaches (col. 2, lines 17-19) patterns of conductors 11 and 12 form connection paths between connecting terminals 14 and also teaches (col. 2, lines 23-25) that the connection path between each terminal 14 and the corresponding terminal 15 can be changed even though terminal 14 remains connected to the same terminal 15. He thus provides a control mechanism operative to select as claimed. It would have been obvious to a person of ordinary skill in the art to include the connection paths and the changing of connection paths as taught by Liddle into the invention of Lein to be able to provide connection paths to a different pair of non-contiguous signal conducting members of the second set as claimed. This is because Liddle teaches (col. 1, lines 33-35) a connector circuit that is adjustable so as to change the connection paths between the first and second sets of terminals, thus motivating a person of ordinary skill in the art for the stated inclusion.

Allowable Subject Matter

21. Claims 27-29 are allowed.

22. Claims 5-7 & 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadeem Iqbal whose telephone number is (571)-272-3659. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)-272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nadeem Iqbal
Primary Examiner
Art Unit 2114

NI